



NASA Formal Methods Symposium

CALL FOR PAPERS

NFM 2011
Third NASA Formal Methods Symposium

Pasadena, California, USA
April 18 - 20, 2011

<http://lars-lab.jpl.nasa.gov/nfm2011>

Important Dates

Submission deadline : December 26, 2010

Notification of acceptance/rejection : February 7, 2011

Final version due : February 18, 2011

Conference : April 18-20, 2011

Theme

The NASA Formal Methods Symposium is a forum for theoreticians and practitioners from academia, government and industry, with the goals of identifying challenges and providing solutions to achieving assurance in mission- and safety critical systems. The focus of the symposium is on formal methods, and aims to foster collaboration between NASA researchers and engineers and the wider aerospace and academic formal methods communities. The symposium will be comprised of a mixture of invited talks by leading researchers and practitioners, presentation of accepted papers, and panels.

Topics of Interest

- Theorem proving
- Model checking
- Real-time, hybrid, stochastic systems
- SAT and SMT solvers
- Symbolic execution
- Abstraction
- Compositional verification
- Program refinement
- Static analysis
- Dynamic analysis
- Automated testing
- Model-based testing
- Model-based development
- Fault protection
- Security and intrusion detection
- Application experiences
- Modeling and specification formalisms
- Requirements specification and analysis

Invited Speakers

Rustan Leino
Microsoft Research, USA
"From Retrospective Verification to Forward-Looking Development"

Oege de Moor
University of Oxford, UK
"Do Coding Standards Improve Software Quality?"

Andreas Zeller
Saarland University, Germany
"Specifications for Free"

Tutorials

Andreas Bauer - NICTA & Australian National University, Australia
Martin Leucker – University of Luebec, Germany
"The Theory and Practice of SALT – Structured Assertion Language for Temporal Logic"

Bart Jacobs - Katholieke Universiteit Leuven, Belgium
"VeriFast: a Powerful, Sound, Predictable, Fast Verifier for C and Java"

Michal Moskal - Microsoft Research, USA
"Verification of Functional Correctness of Concurrent C Programs with VCC"

History

NFM 2011 is the third edition of the NASA Formal Methods Symposium, organized by NASA on a yearly basis. The first in 2009 and was organized at NASA Ames Research Center, Moffett Field, California. The second in 2010 was organized at NASA head quarters, Washington D.C. The symposium originated from the earlier Langley Formal Methods Workshop series.

Paper Submission

There are two categories of submissions:

- **regular papers** : up to 15 pages, describing fully developed work and complete results. Papers can present theory, software engineering aspects, or case studies.
- **tool papers** : up to 6 pages, describing an operational tool. The authors of accepted tool papers will give demonstrations of their tools in tool demo sessions. Tool papers should explain enhancements that have been done compared to previously published work. A tool paper does not need to present the theory behind the tool but can focus more on its features, and how it is used, with screen shots and examples.

All papers should be in English and describe original work that has not been published or submitted elsewhere.

Submissions will be fully reviewed and the symposium proceedings (including regular papers and tool papers) will appear as a volume in Lecture Notes of Computer Science. Papers must use the LNCS style, and be in pdf format.

Costs

There will be no registration fee charged to participants.

Programme Chairs

Mihaela Bobaru, NASA/Jet Propulsion Laboratory
Klaus Havelund, NASA/Jet Propulsion Laboratory
Gerard Holzmann, NASA/Jet Propulsion Laboratory
Rajeev Joshi, NASA/Jet Propulsion Laboratory

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